SANTA CRUZ BIOTECHNOLOGY, INC.

STI1 (H-251): sc-292778

BACKGROUND

Stress-induced-phosphoprotein 1 (STI1) functions as a co-chaperone for HSP70 and HSP90 during heat shock response. STI1 exists as either a monomer or a dimer, and this conformational flexibility facilitates its function in organizing HSP70/HSP90. HSP90 acts as an ATPase, and requires the recruitment of client proteins and proper conformation to function. STI1 acts as a "scaffold" for client protein recruitment to the relaxed, ADP-bound conformation of HSP90, thus suppressing ATP turnover during the loading phase and allowing proper function.

REFERENCES

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2. van der Spuy, J., et al. 2001. The cochaperone murine stress-inducible protein 1: overexpression, purification, and characterization. Protein Expr. Purif. 21: 462-469.
3. Siligardi, G., et al. 2002. Regulation of Hsp90 ATPase activity by the co-chaperone Cdc37p/p50Cdc37. J. Biol. Chem. 277: 20151-20159.
4. Abbas-Terki, T., et al. 2002. The Hsp90 co-chaperones Cdc37 and STI1 interact physically and genetically. Biol. Chem. 383: 1335-1342.
5. Zanata, S.M., et al. 2002. Stress-inducible protein 1 is a cell surface ligand for cellular prion that triggers neuroprotection. EMBO J. 21: 3307-3316.
6. Richter, K., et al. 2003. STI1 is a non-competitive inhibitor of the Hsp90 ATPase. Binding prevents the N-terminal dimerization reaction during the atpase cycle. J. Biol. Chem. 278: 10328-10333.
7. Wegele, H., et al. 2003. STI1 is a novel activator of the Ssa proteins. J. Biol. Chem. 278: 25970-25976.
8. Lee, P., et al. 2004. STI1 and Cdc37 can stabilize Hsp90 in chaperone complexes with a protein kinase. Mol. Biol. Cell 15: 1785-1792.
9. Sakudo, A., et al. 2005. PrP cooperates with STI1 to regulate SOD activity in PrP-deficient neuronal cell line. Biochem. Biophys. Res. Commun. 328: 14-19.

CHROMOSOMAL LOCATION

Genetic locus: STIP1 (human) mapping to 11q13.1; Stip1 (mouse) mapping to 19 A.

SOURCE

STI1 (H-251) is a rabbit polyclonal antibody raised against amino acids 203-453 mapping near the C-terminus of STI1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

STI1 (H-251) is recommended for detection of STI1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for STI1 siRNA (h): sc-106905, STI1 siRNA (m): sc-153893, STI1 shRNA Plasmid (h): sc-106905-SH, STI1 shRNA Plasmid (m): sc-153893-SH, STI1 shRNA (h) Lentiviral Particles: sc-106905-V and STI1 shRNA (m) Lentiviral Particles: sc-153893-V.

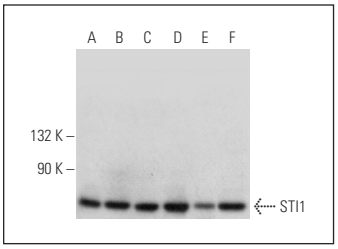
Molecular Weight of STI1: 63 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

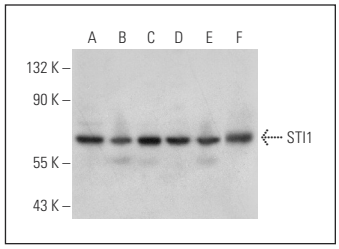
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



STI1 (H-251): sc-292778. Western blot analysis of STI1 expression in A-431 (**A**), HeLa (**B**), NIH/3T3 (**C**), Jurkat (**D**), Hep G2 (**E**) and PC-3 (**F**) whole cell lysates.



STI1 (H-251): sc-292778. Western blot analysis of STI1 expression in SK-OV-3 (**A**), PC-12 (**B**), L929 (**C**), MOLT-4 (**D**) and RAW 264.7 (**E**) whole cell lysates and mouse cerebellum tissue extract (**F**).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

MONOS Satisfaction Guaranteed

Try **STI1 (D-6): sc-390203** or **STI1 (E-10): sc-390225**, our highly recommended monoclonal alternatives to STI1 (H-251).